

## MINI-REVIEW

# The psychological wellbeing of ART children: what have we learned from 40 years of research?

**BIOGRAPHY**

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**ABSTRACT**

Our understanding of what makes a family has changed dramatically in recent decades due to advances in reproductive technologies accompanied by changing social attitudes. But what has the impact been on children? This article presents a summary of research on parent–child relationships and the psychological adjustment of children in families created by assisted reproduction. The findings show that families with lesbian mothers, gay fathers, and single mothers by choice, and families created by donor conception and surrogacy, are just as likely to flourish as traditional families, and sometimes more so, although the children from these families will sometimes face prejudiced attitudes from others. It is concluded that the quality of family relationships and the wider social environment matter more for children's psychological wellbeing than the number, gender, sexual orientation, or biological relatedness of their parents.

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**KEYWORDS**

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Parent-child relationships  
Single mothers by choice

In June 2020, in their article *Reproduction Reimagined*, Eli Adashi and Glenn Cohen claimed that the use of gametes derived from human embryonic stem cells to create children who are genetically related to both partners in same-sex couples is just a matter of time (Adashi and Cohen, 2020). We have come a long way since the first lesbian mothers to have children through sperm donation were met with outrage in 1978 (Patnya, 1978), the same year that Louise Brown, the first IVF baby, was born. Each new development in the field of assisted reproduction has been accompanied by a new set of concerns about the psychological consequences for children. This paper provides a short summary of studies designed to answer the questions raised by the creation of children by assisted reproductive technology (ART). For further details see Golombok (2020).

## LESBIAN MOTHER FAMILIES

Although early studies found no evidence of increased levels of psychological problems in children raised in lesbian mother families following their parents' divorce (Golombok, et al., 1983), critics argued that the findings of research on children who spent their early years in a traditional family with a father in the home could not be generalised to children born to lesbian couples by donor insemination who had been raised without a father from the start. The increased use of donor insemination by lesbian women in the 1980s and 1990s sparked a new wave of research (Bos, 2004, 2007; Brewaeys, et al., 1997; Chan, et al., 1998). These studies showed that children who had been raised by lesbian mothers from birth were functioning just as well as children with a mother and a father.

In a longitudinal study of lesbian mother families created by donor insemination from pregnancy to early adulthood, with a sample retention rate of 92%, it was found that the children showed fewer psychological problems than other children at age 10 (Gartrell, et al., 2005) and 17 (Gartrell, et al., 2010). At age 25, the young adults were as psychologically healthy as their peers (Gartrell, et al., 2018).

## DONOR CONCEPTION FAMILIES

A concern regarding children born by gamete donation to heterosexual couples

was that the non-genetic parent might be distant from, or hostile towards, the child, and, consequently, that children who are not the genetic progeny of their parents would be less likely to thrive. In addition, the secrecy that often surrounds donor conception was thought to be detrimental to children's psychological wellbeing (Daniels and Taylor, 1993).

In order to investigate these issues, we began a longitudinal study of families formed by egg or sperm donation at the millennium and visited them six times from infancy to adolescence. In direct contrast to expectations, the findings indicated more positive parent-child relationships in the donor conception families when the children were in their preschool years than in the comparison group of families formed without assisted reproduction, irrespective of the type of donor conception used, and the children showed high levels of psychological adjustment (Golombok, et al., 2004a, 2005, 2006a).

When the children were aged 7 and 10, the families were still functioning well, but the parents who had been open about the donor conception had more positive relationships with their children (Golombok, et al., 2011a; Golombok, et al., 2013). We also identified longer-term benefits of early disclosure; although the children generally showed positive psychological adjustment, those who were first told about their conception when they were very young had better relationships with their mothers at age 14 (Ilioi, et al., 2017a). This result was particularly striking as the mothers and adolescents independently corroborated each other's reports.

Despite these reassuring findings, the prospect of having a genetically unrelated child can be daunting for parents. In an investigation of mothers of babies conceived by identity-release egg donation, many mothers said that they had worried during pregnancy about whether their babies would feel like their own (Imrie, et al., 2020). The majority discovered that their fears were unfounded. For others, it took longer. Although this also happens to mothers who are genetically related to their babies, the mothers in the study attributed their feelings to the absence of a genetic link with their child. Most had bonded with their babies by the time the child was 12 months old.

But just because donor-conceived children are well-adjusted and have good relationships with their parents does not mean that their donor is unimportant to them. Changing attitudes towards telling children about their donor conception has resulted in an increasing number of donor-conceived people who know about their origin, and who wish to trace their donor and donor siblings, i.e. genetically related half-siblings born from the same donor who have grown up in different families. In order to investigate the motivations and experiences of those who search for their donor relations, we collaborated with the Donor Sibling Registry on a survey (Freeman, et al., 2009; Jadva, et al., 2010). Those who took part were curious about similarities in appearance and personality with their donor, and they wanted to gain a greater understanding of their ancestry and of themselves. We also discovered that some donor siblings who were finding each other over the Internet were forming close emotional bonds.

## SURROGACY FAMILIES

In addition to concerns about the exploitation of surrogates, many questions have been raised about the impact of surrogacy on families formed in this way (Golombok, et al., 2004b). Would children be emotionally harmed by the knowledge that they had been created for the purpose of being given away to the intended parents? And if the surrogate remained in contact with the family, would it undermine the relationship between the intended mother and the child?

To address these questions, we included a representative group of surrogacy families in our longitudinal study of donor-conceived children that began at the millennium. When the children were one, these parents showed greater warmth and enjoyment in their babies than those who had conceived naturally (Golombok, et al., 2004b). At age two, the surrogacy mothers took greater pleasure in their toddlers, and felt less anger, guilt and disappointment in them (Golombok, et al., 2006b). When the children were three, the surrogacy mothers were more affectionate, and interacted more, with their toddlers (Golombok, et al., 2006a).

By age seven, most of the surrogacy children knew how they had been born.

The parents still had good relationships with their children, but they were no longer doing better than the natural conception parents (*Golombok, et al., 2011b*). Although some of the surrogacy children showed an increase in psychological problems at this age, these difficulties had disappeared by the time we re-visited the families when the children were ten (*Golombok, et al., 2013*). Interestingly, the same pattern has been found among internationally adopted children (*Stams, et al., 2000*). A likely explanation for this phenomenon, as first suggested with regard to adoption (*Juffer and van IJzendoorn, 2005*), is that these children are faced with issues relating to their identity at a younger age than most other children.

At age 14, the adolescents were found to be flourishing (*Golombok, et al., 2017a*). We asked them directly how they felt about being born through surrogacy (*Zadeh, et al., 2018*). Only one expressed some unhappiness, the majority were largely uninterested, and a few saw it as an advantage.

## GAY FATHER FAMILIES

Since the millennium, a small but growing number of gay couples have become fathers with the help of a surrogate mother. The circumstances of gay fathers are different from those of lesbian mothers in that it is rare for fathers, whether heterosexual or gay, to be primary caregivers, and fathers are generally believed to be less suited to parenting than are mothers (*Biblarz and Stacey, 2010*).

As with our previous research, we wanted to address the questions that were being asked about this new kind of family. Are men less competent at parenting than women? And do their children develop psychological problems as a result? We compared two-parent gay father families formed through surrogacy to two-parent lesbian mother families created by sperm donation, all with a child aged between 3 and 9 years (*Golombok, et al., 2017b*). Not only did the gay fathers have just as positive relationships with their children as the lesbian mothers, which demonstrated that fathers can parent as well as mothers, but their children showed even lower levels of emotional problems than the children of lesbian mothers. One possible explanation is that men may be less sensitive to children's

emotional problems than women, and thus may be less likely to identify them. Alternatively, gay fathers may be especially good parents.

## SINGLE MOTHERS BY CHOICE

Much of the concern about single mothers by choice stems from the findings of earlier research showing that the children of divorced or unmarried single mothers whose pregnancies were unplanned function less well, on average, than children with two parents (*Amato, 2005; Coleman and Glenn, 2009*). However, single mothers by choice are different from divorced or unmarried single mothers; they have made an active decision to parent alone rather than finding themselves in this situation unintentionally, and the financial hardship, parental conflict and maternal depression associated with negative outcomes for children in single mother families resulting from marital breakdown and unplanned single parenthood do not usually apply to single mothers by choice. But these children face a situation that those from other kinds of single mother families usually do not – unless they have a known donor, they do not know the identity of their biological father as they are growing up.

A comparison between families with single mothers by choice and two-parent families, all with donor-conceived children aged between 4 and 9 years, found that the children of single mothers by choice were just as close to their mothers, and just as well-adjusted, as the children in two-parent families (*Golombok, et al., 2016*). Similarly, a follow-up of the children when they reached 8 to 10 years found no differences in the quality of mother-child relationships or children's emotional and behavioural problems (*Golombok, et al., in press*).

## CONCLUSIONS

Just like children in traditional families, the psychological wellbeing of children who grow up in families created through ART depends on the wellbeing of their parents, the quality of their relationships with their parents, and the social circumstances in which they grow up. But ART families generate additional issues for children, one of which is having a different pattern of genetic and gestational connections to people inside

and outside their immediate family. Some children have little interest in these people, others are curious and want to find out more, and yet others have a strong desire to meet them.

A further issue faced by children in ART families, especially children with lesbian or gay parents, is stigmatization. In a study of the school experiences of children with same-sex parents (*Guasp, et al., 2010*), it was found that classmates made negative comments about homosexuality that were distressing, some children were shunned because of their same-sex parents, and others reported that they never see families like their own in the books that they read or the films that they see. Stigmatization of same-sex parent families has been associated with emotional and behavioural problems in children (*Bos and Gartrell, 2010; van Gelderen, et al., 2012*). Factors that protect children against the negative effects of stigmatization include contact with other children with same-sex parents, supportive schools and communities, and legislation that is conducive to the optimal functioning of same-sex parent families (*Goldberg and Smith, 2017; Lick, et al., 2012; Patterson, et al., 2014; van Gelderen, et al., 2012*).

Because ART families diverge from the traditional family in various ways, they separate aspects of family structure that usually go together. What these families show us is that the number, gender, sexual orientation, and biological relatedness of parents matters less for children than previously thought. The presence of a father, or a mother, or two parents, is not essential for children to thrive. What matters most for children is the quality of relationships within their family, the support of their wider community, and the attitudes of the society in which they live.

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